

LISTING OF THE CLAIMS

Claims 1-6 (Cancelled).

Claim 7 (Previously Presented): A process for the sequential production of a library of N different solids, comprising heterogeneous catalysts, wherein N, within a day of beginning production, is an integer of at least 2, the process comprising

- a) producing at least two different sprayable solutions, emulsions and/or dispersions of elements and/or element compounds of the chemical elements present in the catalysts,
- b) continuously metering the at least two different solutions, emulsions and/or dispersions in a predefined ratio into a mixing apparatus in which the solutions, emulsions and/or dispersions are homogeneously mixed to form a mixture,
- c) continuously drying the mixture removed from the mixing apparatus, wherein the drying is performed by spray drying or spray-freeze drying, to produce a dried mixture, and recovering the dried mixture that is a solid, and
- d) changing the ratios in b) and repeating b), c) and d) (N-1) times until N different solids are obtained;

wherein the ratio in b) and d) is set and changed by changing or adapting the flow velocities of the different solutions, emulsions and/or dispersions during the metering into the mixing apparatus and the total stream of the individual solutions, emulsions and/or dispersions remains constant during the metering in the mixing apparatus and to the drying.

Claim 8 (Previously Presented): The process as claimed in claim 7, wherein a time period between mixing the solutions, emulsions and/or dispersions and drying is a positive time period of less than 10 minutes.

Claim 9 (Cancelled).

Claim 10 (Previously Presented): The process as claimed in claim 7, wherein the different solids are produced in each case in amounts of from 0.1 to 500 g.

Claim 11 (Previously Presented): The process as claimed in claim 7, wherein the ratio in b) is set and changed by central computer control of output of pumps which in each case separately transport the different solutions, emulsions and/or dispersions into the mixing apparatus.

Claim 12 (Previously Presented): The process as claimed in claim 7, wherein the solids obtained in d) are tested for a desired catalytic property by a process comprising, separately introducing the individual solids into multiple reactors, and subsequently testing each solid for the desired catalytic property.

Claim 13 (Previously Presented): The process of claim 7, wherein N is at least 9.

Claim 14 (Previously Presented): The process of claim 7, wherein N is at least 45.

Claim 15 (Previously Presented): The process of claim 7, wherein N is at least 90.

Claim 16 (Previously Presented): The process of claim 7, wherein N ranges from at least 2 to 5,000.

Claim 17 (Previously Presented): The process of claim 7, wherein N ranges from at least 2 to 50,000.

Claim 18 (Previously Presented): The process of claim 7, wherein the different solids are produced in each case in amounts of from 1 to 100 g.

Claim 19 (Previously Presented): The process of claim 7, wherein the at least two different sprayable solutions, emulsions, and/or dispersions each have a dissolved solids content and/or a solids content of 0.5 to 50% by weight, based on the total weight of the solution, emulsion and/or dispersion.

Claim 20 (Previously Presented): The process of claim 7, wherein the at least two different sprayable solutions, emulsions, and/or dispersions each have a dissolved solids content and/or a solids content of 1 to 30% by weight, based on the total weight of the solution, emulsion and/or dispersion.

Claim 21 (Previously Presented): The process of claim 7, wherein each sprayable solution, emulsion and/or dispersion comprises a unique element compound.

Claim 22 (Previously Presented): The process of claim 21, wherein each unique element compound is differently selected from one of ammonium heptamolybdate, ammonium metavanadate, ammonium paratungstate, iron (II) nitrate, iron (III) nitrate, silver nitrate, bismuth nitrate, iron sulfate, titanium oxysulfate, niobium oxalate, antimony titrate, or niobium tartrate.

Claim 23 (Previously Presented): The process of claim 21, wherein each unique element compound comprises a unique catalytically active metal.

Claim 24 (Previously Presented): The process of claim 23, wherein each unique catalytically active metal is, individually, selected from subgroup V and/or subgroup VI of the Periodic Table of the Elements.

Claim 25 (Previously Presented): The process of claim 23, wherein each unique catalytically active metal is selected from the platinum group of the Periodic Table of the Elements.

Claim 26 (Previously Presented): The process of claim 7, wherein each sprayable solution, emulsion and/or dispersion comprises a unique element.

Claim 27 (Previously Presented): The process of claim 26, wherein each unique element is a metal and/or transition metal.